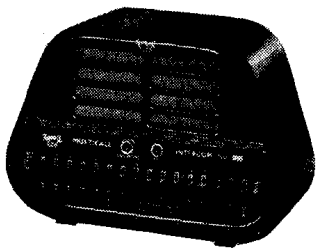
SEPTEMBER
1947

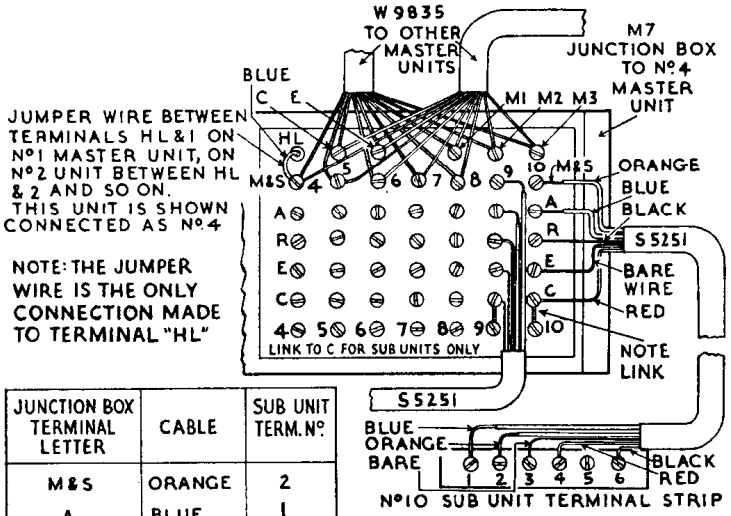
SERVICE ELECTRICAL and RADIO TRADING CHARTS

ARDENTE INTERCOMS
EVER-READY MODEL C
MULLARD MAS 305
REGENTONE AW66

ARDENTE "INTERCOM" SYSTEMS

Comprehensive range of AC mains-operated loudspeaking intercom munication instruments for offices, factories, shops, hotels, restaurants, etc Made by Ardente Acoustic Laboratories, Ltd., Compton, Guildford Surrey





JUNCTION BOX TERMINAL LETTER	CABLE	SUB UNIT TERM. Nº.
M&S	ORANGE	2
A	BLUE	1
R	BLACK	6
E	BARE	3
C	RED	4

DIAGRAM SHOWS Nº4 MASTER UNIT IN A SYSTEM OF EIGHT MASTER UNITS, EACH STATION HAVING ONE OR TWO "PERSONAL" SUB UNITS CONNECTED TO POSITIONS 9&10

M7 **Diagram of connections for M7 installation, which provides from three to eight Master-units with intercommunication, each Master having two to seven Sub-units. Right: cable colour code for the M7 installation**

Terminal	Cable	Terminal	Cable
C ..	Red	4* ..	Slate
E ..	White	5* ..	Red-blue
M1 ..	Green	6* ..	Red-white
M2 ..	Black	7* ..	Red-orange
M3 ..	Brown	8* ..	Red-green

* If any used for Sub-unit, do not connect multi-way cable.

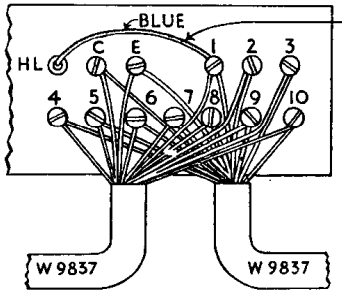
VALVE OPERATING CONDITIONS

Type	EF37	EL32	AZ31
Heater volts ..	6.3	6.3	4
Heater amps. ..	.2	.2	1.1
Anode volts ..	20	205	200–0–200 AC
Anode m/a ..	1.1	20	—
Screen volts ..	10	210	—
Screen m/a ..	.4	3.5	—
Cathode volts ..	1.5	15	220
Cathode m/a ..	1.5	23.5	25

Voltages measured with a Universal Avometer
Indicator lamps: 6.2V .3A, 15mm MES

TERMINAL	CABLE
C	RED
E	WHITE
1	GREEN
2	BLACK
3	BROWN
4	SLATE
5	RED-BLUE
6	RED-WHITE
7	RED-ORANGE
8	RED-GREEN
9	RED-BLACK
10	RED-BROWN
SPARE	RED-SLATE
SPARE	BLUE-WHITE
SPARE	BLUE-ORANGE

M10 JUNCTION BOX Nº1 UNIT



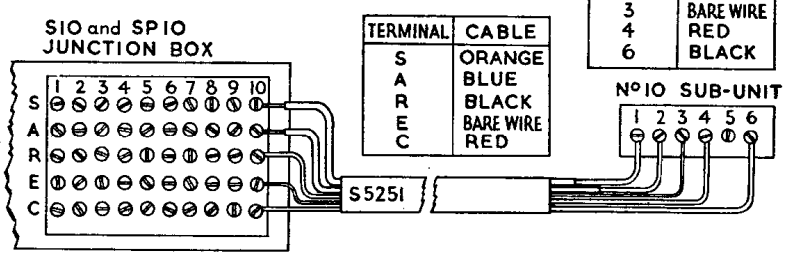
JUMPER WIRE BETWEEN TERMINALS HL&1 ON Nº1 UNIT, ON Nº2 UNIT BETWEEN HL& 2, AND SO ON

M10 **"All Master-unit" system with complete intercommunication between 10 points—that is, five separate conversations simultaneously. Right: the cable colour code**

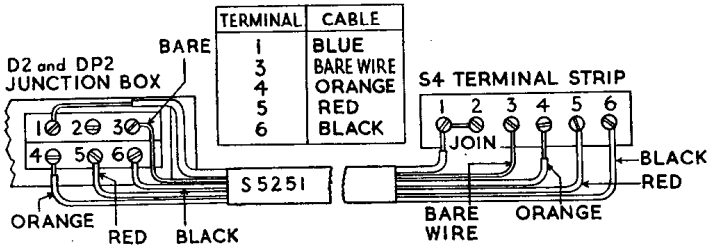
Terminal	Cable	Terminal	Cable
C ..	Red	7 ..	Red-orange
E ..	White	8 ..	Red-green
1 ..	Green	9 ..	Red-black
2 ..	Black	10 ..	Red-brown
3 ..	Brown	Spare ..	Red-slate
4 ..	Slate	Spare ..	Red-white
5 ..	Red-blue	Spare ..	Red-orange
6 ..	Red-white		

JUNCTION BOX TERMINAL NUMBERS CORRESPOND TO THOSE ON SELECTOR SWITCH DIAL

TERMINAL	CABLE
1	BLUE
2	ORANGE
3	BARE WIRE
4	RED
6	BLACK



S10, SP10 **Connection diagram for the Selectacall which comprises one Master unit with up to 10 Sub-units, which can be called individually or collectively**



D2 **Simplest of all installations, the D2 consists of one Master- and one Sub-unit. Sub-unit can call Master. Further version, DP2, provides a privacy switch at the Sub-unit**

D2. Duocall. Simple two-way system, using one S4 Sub-unit. Sub-unit may call Master and Master may hear replies from the Sub-unit without any manual operation at the Sub.

DP2. Duocall. Similar system, but with privacy feature. Replies cannot be heard from the Sub-unit until the switch is pressed at the Sub-unit.

S10. Selectacall. One Master unit may be connected with up to 10 Sub-units (type S4), who may be called individually or simultaneously. No manual operation is necessary at any of the Sub-units in order to reply. To call Master, the Sub merely has to press a switch and identify himself.

SP10. Selectacall. Privacy system for use with Sub-units, type S5. Similar to S10, but gives privacy at the Sub-units which cannot be heard until their switch is set to "Reply."

M10. Multicall. All Master-unit system, allowing complete intercommunication between 10 points. Five separate conversations may take place at the same time.

M30. Multicall. Similar to M10, but allows for complete intercommunication on 30 Master units.

M7. Mastercall. System combining advantages of S10 and the M10. A number of Master units, wired for intercommunication with each other, are also connected to their own personal Sub-units. Number of Master-units may range from three to eight, the number of Sub-units connected to each Master varying from seven to two. Total number of units, Sub *or* Master, that may be connected to one Master is 10.

DESCRIPTION

Supply Voltage. All Master units are made for operation on 200–240V, 50 c/s (25W). Units can be made to order for 100–120V. Sub-units do not require any mains connections. If DC only is available, then a rotary converter, of suitable capacity according to the number of Master units, must be used.

Cabling. All Sub-units (S4 and S5) are connected to the various Master units by one type of 5-core cable; S.5251. This cable must be used, and not ordinary bell wire, to avoid hum and interference. Runs up to 500 yards may be used.

Master units of all types are inter-connected with each other by three different types of multi-core cable, according to the system, as follows: W.9835, 10-way for M7; W.9845, 35-way for M30; W.9837, 15-way for M10.

These cables are not shielded, and in the event of a smaller number of Masters being required in

ARDENTE—*Continued*

the complete installation, then a cable with a smaller number of conductors may be used, it being borne in mind that there must always be a basic pair, plus one wire for each Master in the system, *i.e.*, for three Master stations a five-way cable is necessary. Cable-runs up to 1,500 yards in a system may be used.

Cabinets. All cabinets, for both Sub-and Master-units, are the same size, and are made of black bakelite. Overall dimensions are 12 in. wide by 8 in. high by 5¾ in. deep.

Volume Control. Each Master is provided with a volume control, which, in the case of models M7, M10 and M30, operates on incoming speech only, and, in the case of models D2, DP2, S10 and SP10, operates on incoming and outgoing speech.

Privacy Earphones. All Masters may be fitted, at extra charge, with a hookswitch and a privacy earphone, so that replies are not audible in the room when the earphone is removed from its hook.

"Busy" and "Call Waiting" Lamps. These are fitted to all Master units, except D2 and DP2, indicating whether another unit is engaged when calling, and indicating to the called unit, who may be engaged in conversation with someone else, that a call is waiting.

Conference Facilities. Up to five Master units may hold full conference facilities on the M30 system only.

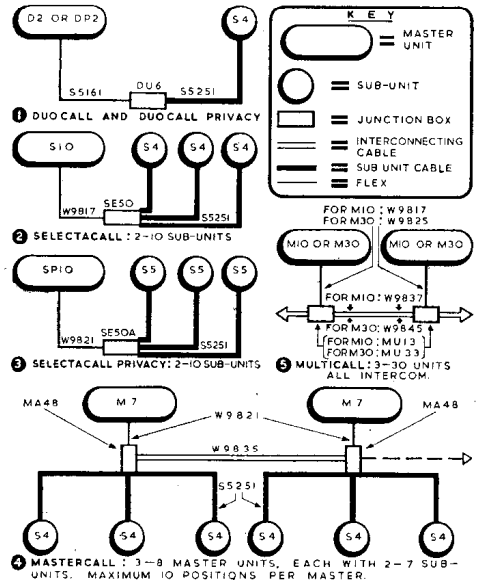
Valves. The valves used in the Master-unit amplifiers are : first stage, one Mullard EF37 (or EF36) ; output stage, one Mullard EL32 and one Mullard AZ31 rectifier.

INSTALLATION

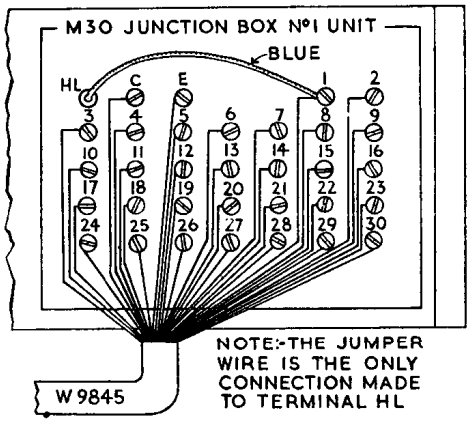
Layout plans of the various system, showing the cabling used, are given in the diagrams.

Do not attempt to operate a Master-unit and a Sub-unit or two Master-units in the same room, or where there is a short acoustic path between two adjacent units. Otherwise howl, due to feed-back, will be set up.

When connecting Masters and Subs, a wire of a certain colour connects to terminals of the same number throughout. Make sure that shielding on blue and orange wires does not "short" any terminals.



Schematic wiring plans showing how Master- and Sub-units are related in the different Ardente installations



M30 Connection diagram for the most comprehensive system with full intercommunication between 30 Masters. Below: colour code.

Terminal		Cable	Terminal		Cable
C	..	Red	17	..	Blue-slate
E	..	White	18	..	White-orange
1	..	Green	19	..	White-green
2	..	Black	20	..	White-black
3	..	Brown	21	..	White-brown
4	..	Slate	22	..	White-slate
5	..	Red-blue	23	..	Orange-green
6	..	Red-white	24	..	Orange-black
7	..	Red-orange	25	..	Orange-brown
8	..	Red-green	26	..	Orange-slate
9	..	Red-black	27	..	Green-black
10	..	Red-brown	28	..	Green-brown
11	..	Red-slate	29	..	Green-slate
12	..	Blue-white	30	..	Black-brown
13	..	Blue-orange	Spare	..	Black-slate
14	..	Blue-green	Spare	..	Brown-slate
15	..	Blue-black	Spare	..	Red-white-blue
16	..	Blue-brown			

OPERATION

Operation is similar with all systems, in that each Master has a spring-loaded "Press-to-Talk" key, which must be held down while speaking and released in order to hear the reply.

Sub-units, type S4, do not have to manipulate switch at all, either when speaking or listening, but only have to depress a switch when they wish to initiate a call to the Master unit, or, in the case of type S5, when the switch has to be set to "Reply" at the beginning of a conversation.

Master units may be left switched on all day without any fear of over-heating. As consumption is low (25W per Master-unit) even a large system, with the full number of 30 units, is economical to run.